HiEnergy Technologies, Inc.

PRODUCTS

AT VARIOUS STAGES OF DEVELOPMENT

July 15, 2003

PRODUCT #1: CARBOMB FINDER Model CF-303 (STEALTH):

CF-303 plays a dual role of both the scanner *and* confirmation sensor.

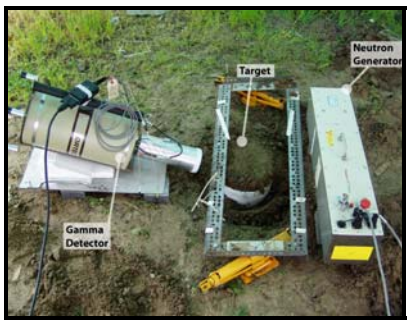
Carbomb Finder CF-303 is designed to stoichiometrically detect 100kg of explosive in a closed trunk of a parked or moving car with a decision time of 26-55 seconds. Price: $500,000 without van.

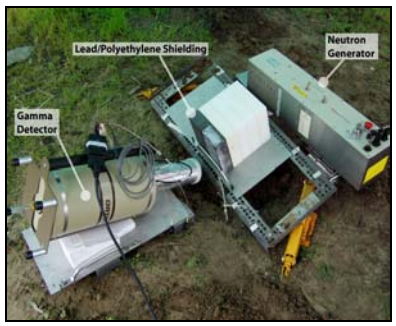
The simpler (non-directional) model, CF-201 using Minisenzor is expected to take about 3 times longer and cost $250,000.

CF-201 tests are scheduled for the week of July 14 and those with CF-303 for mid-August 2003.

PRODUCT #2: ANTI-TANK LANDMINE CONFIRMATION SUPERSENZOR: FALSE ALARM ELIMINATOR.

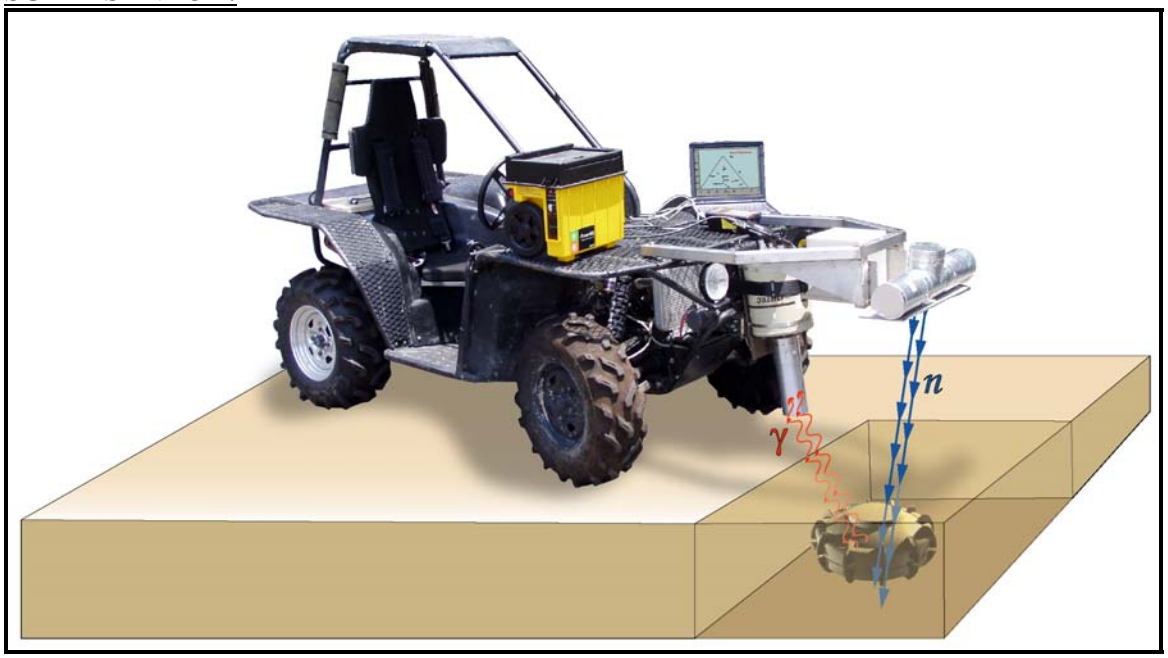
MINISENZOR TESTS:





One-man portable

SUPERSENZOR:



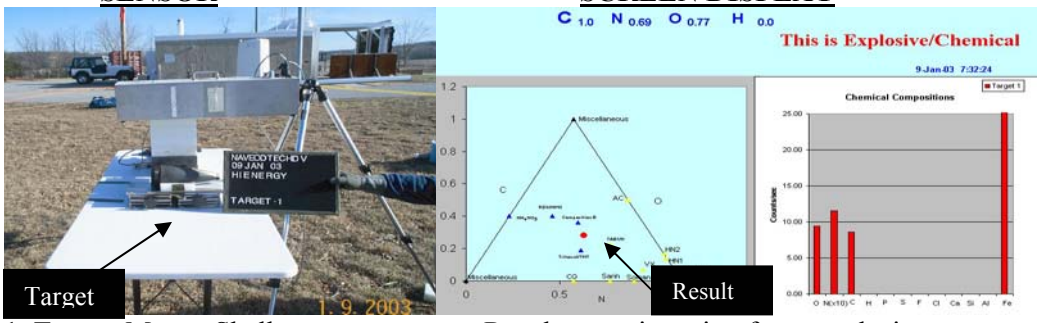
Developed under 3 DOD SBIR contracts, totaling $950,000 under the Army's Night Vision and Electronic Sensors Directorate (NVES), Supersenzor is currently in Phase II. Our tests using non-directed Minisenzor (top 3 figures) have demonstrated its ability to stoichiometrically detect an AT mine under 1 inch of soil.

Supersenzor system, installed on the All Terrain Vehicle (lower photo), is locally manufactured and scheduled for the company's open-air tests in August, to be followed up by the NVES tests at Fort Belvoir, MD in September 2003. Acceptance on the part of NVES would start its commercialization (Phase III joint private-DOD funding). The 2 components of Supersenzor (directed neutron generator and gamma receiver) can be removed from the ATV and installed on two tripods (not shown). Estimated price: $400K.

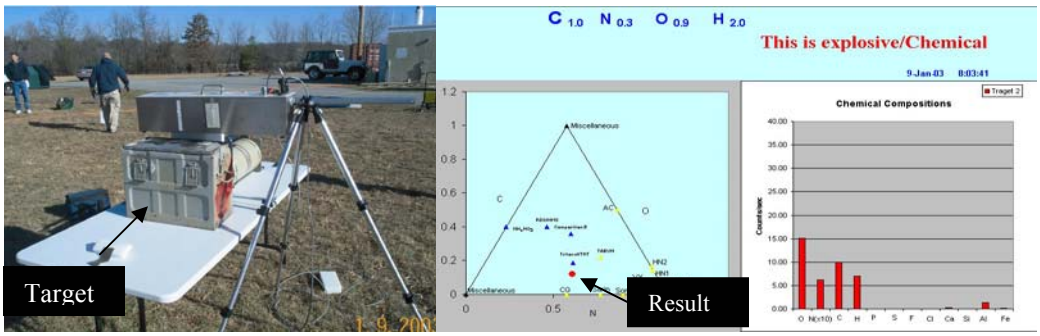
PRODUCT #3: UNEXPLODED ORDINANCE (UXO) PORTABLE CONFIRMATION SENSOR. US NAVY TESTS AT INDIAN HEAD, MD, 01/09/03:

On January 9, 2003, Minisenzor (non-directed) tests for US Navy, were held at Indian Head, MD. The US Navy Test Team reported that we had a 100% hit rate for the "explosive yes or no" tests conducted on a table; and 80% hits in identifying the specific type of explosive. Supersenzor will be able to repeat the performance on the ground, which is much more difficult to do than on a table.

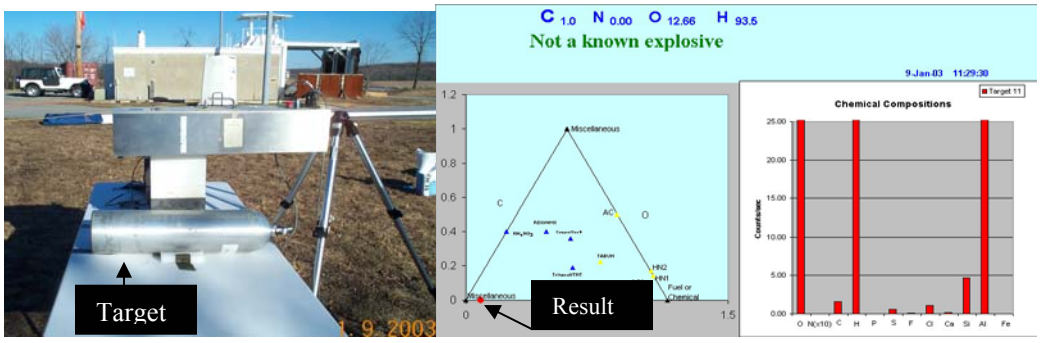
SENSOR **SCREEN DISPLAY**



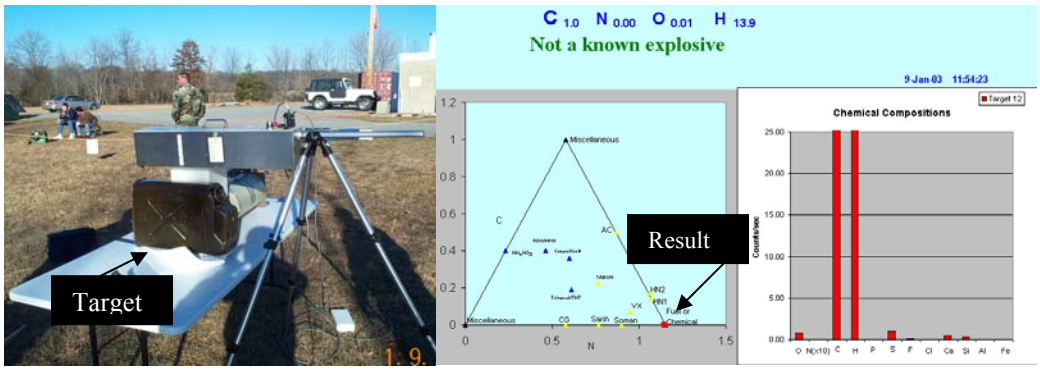
1. Target: Mortar Shell Result: contains mix of two explosives



2. Target: ammunition box Result: contains explosives

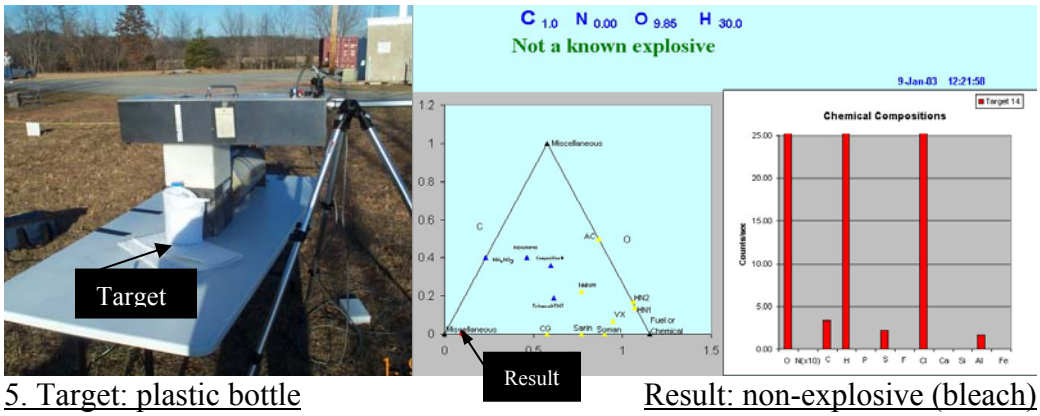


3. Target: pressure tank Result: non-explosive



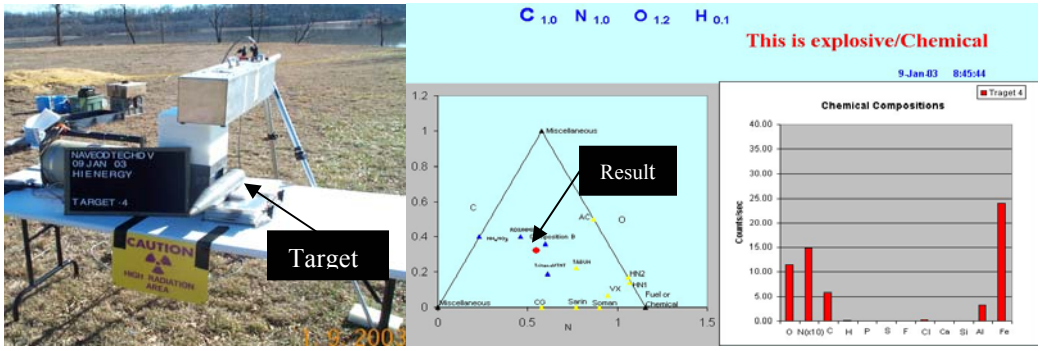
4. Target: fuel canister

Result: contains fuel (diesel)



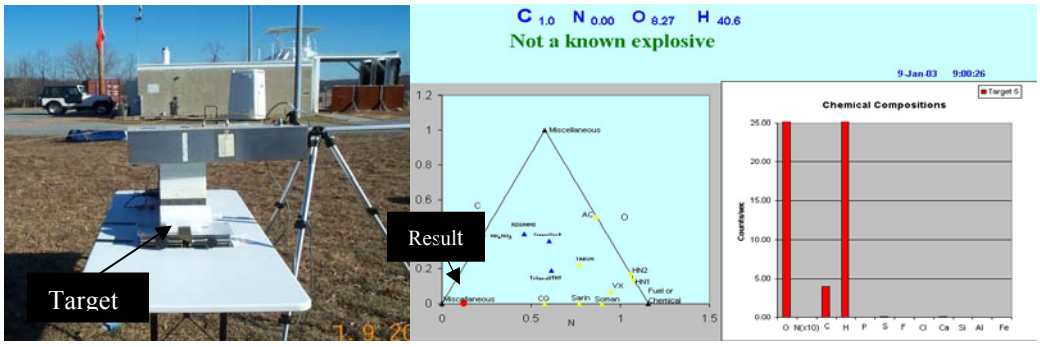
5. Target: plastic bottle

Result: non-explosive (bleach)



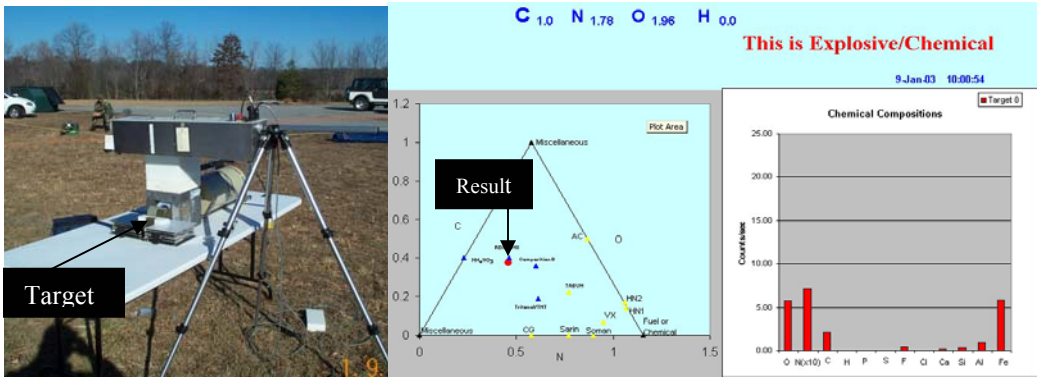
6. Target: artillery shell

Result: contains explosives

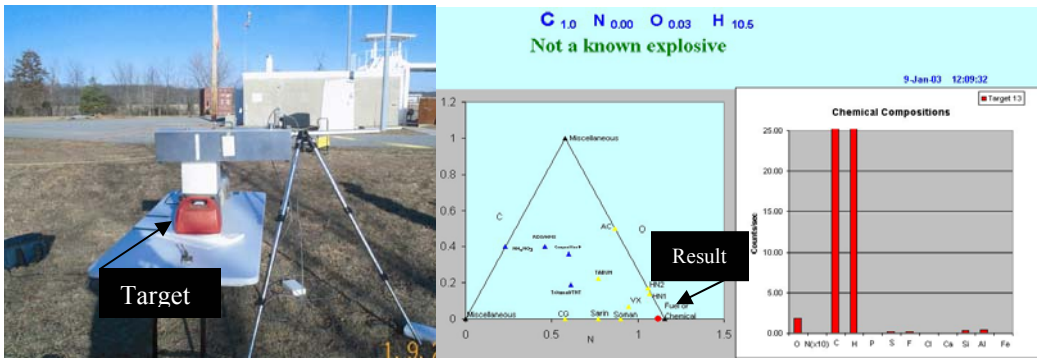


7. Target: plastic bottle

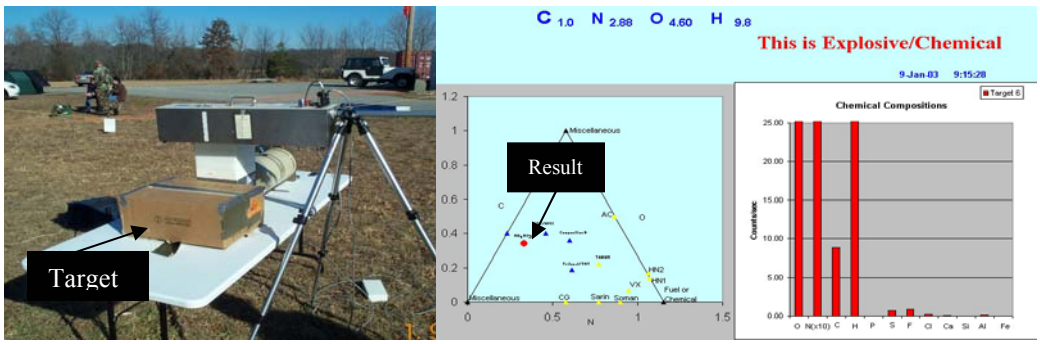
Result: non-explosive



8. Target: small canister Result: contains explosives



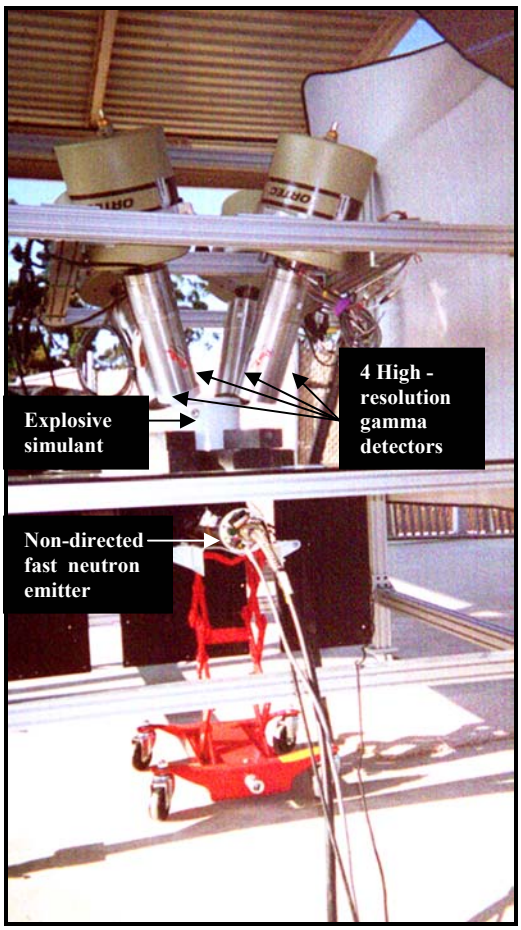
9. Target: plastic container Result: contains fuel



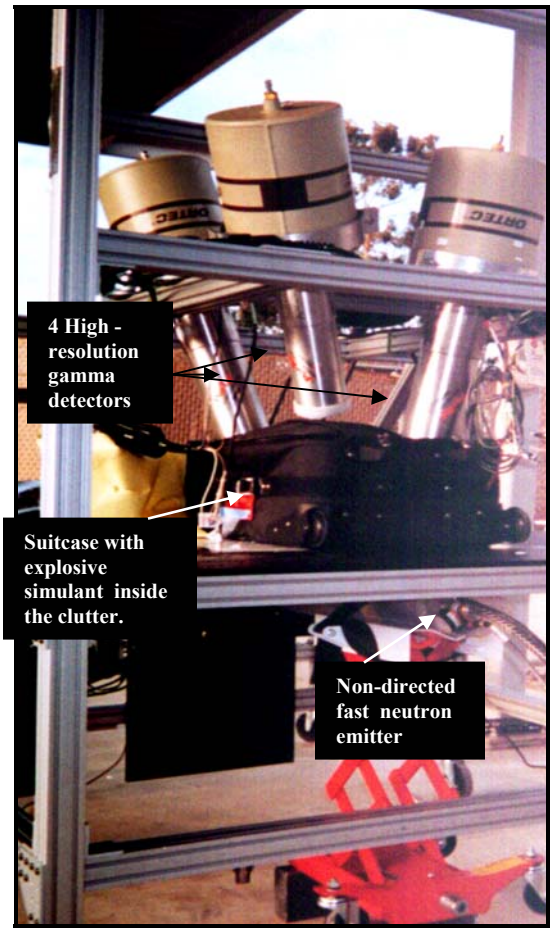
10. Target: cardboard box Result: contains explosive

PRODUCT #4: CHECKED AIRPORT LUGGAGE CONFIRMATION SUPERSENZOR:

FALSE ALARM ELIMINATOR:



Identification of Stand-Alone Explosive

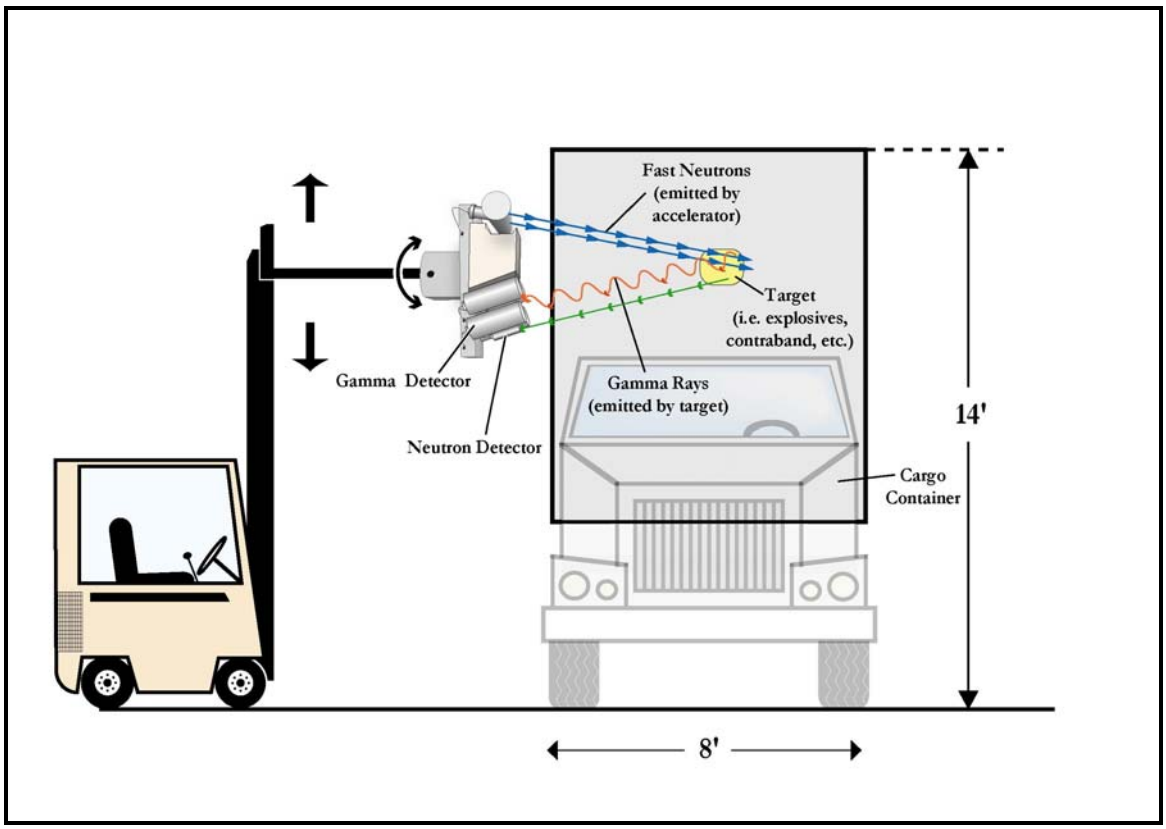


Identification of Explosive in Suitcase

Our tests with Minisenzor (non-directed neutrons) have demonstrated the stoichiometric detection of stand-alone explosives (left photo) with a Decision Time "explosive yes or no" of 15 seconds. When the explosive was immersed in the clutter of a suitcase (right photo), the decision time increased 4-5 folds and in 15% of cases did not give correct answer. Hence, Minisenzor has been excluded as a suitcase sensor.

In contrast, we expect a near 100% accuracy with a 10 second Decision Time with Supersenzor (directed neutrons), which is scheduled for testing in September 2003.

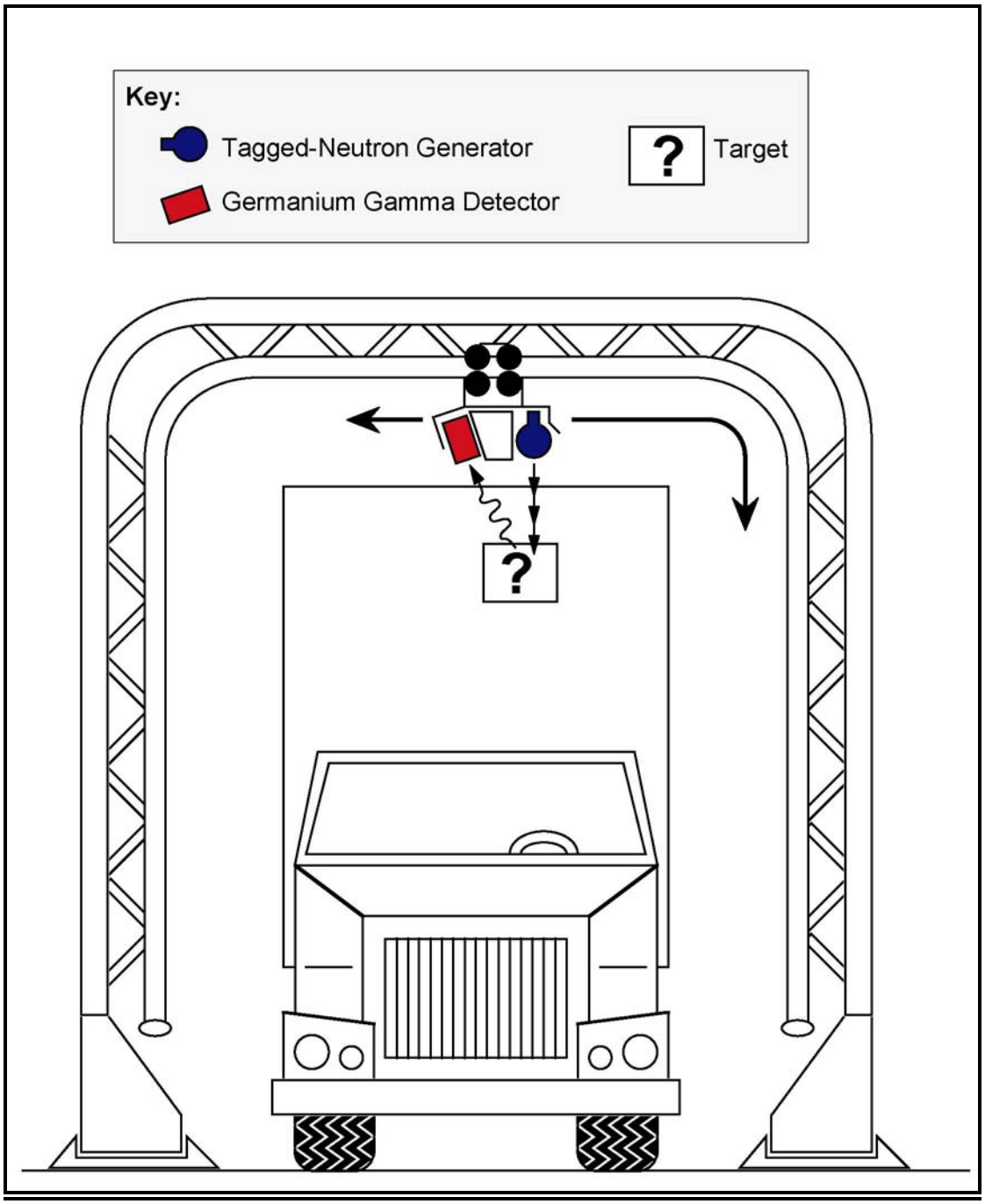
PRODUCT #5A: SUPERSENZOR CONFIRMATION SENZOR FOR SEALED CONTAINERS.
Model: WIZARD: FALSE ALARM ELIMINATOR:



Model WIZARD is forklift borne. Its boom can inspect the container from the top, side, and bottom. Price: $500K (without forklift).

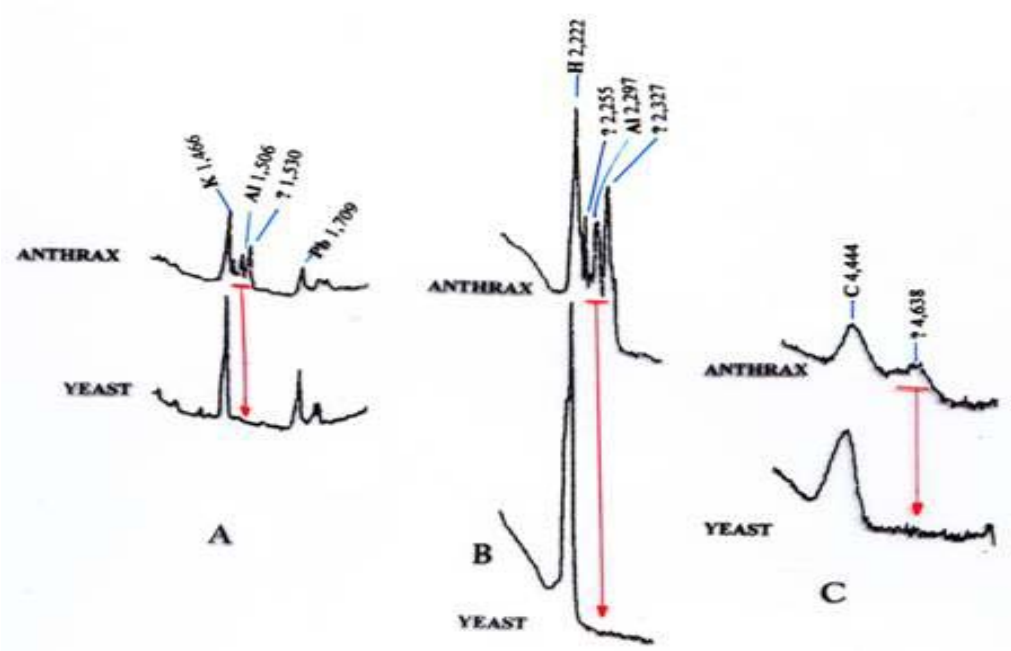
Unrelated to the Navy, on June 4, 2003, we presented WIZARD to Applied Technology Division of US Customs, Washington. But their Program Director asked us to re-design it as a fixed (not mobile) system similar to CARWASH stations (next page).

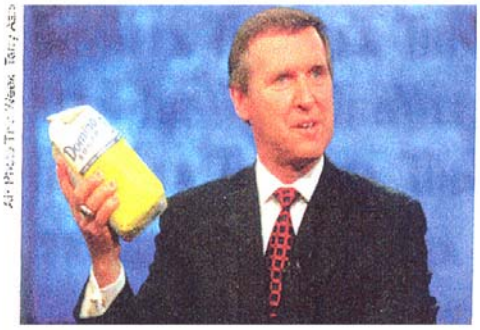
PRODUCT #5B: Border Crossing Confirmation Supersenzor.
Model: "CARWASH": FALSE ALARM ELIMINATOR:



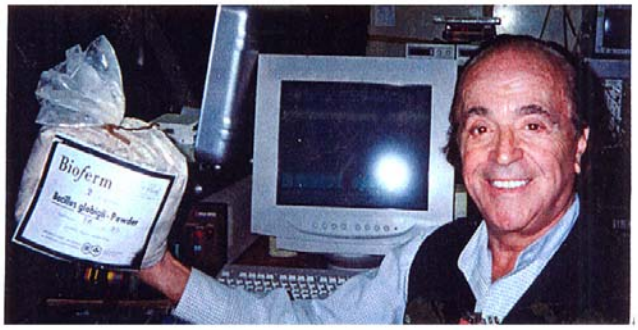
This model is designed to work in tandem with the gamma ray anomaly detectors such as SAIC's "VACIS." Price: $500K without gantry.

PRODUCT #6: BIOLOGICAL AGENTS SUPERSENZOR:





DANGER IN SMALL PACKAGES: Defense Secretary William Cohen explains to the nation the destructive power of even small quantities of biological weapons, Nov. 16, 1997. An amount of anthrax equal to this bag of sugar would kill half of the city of Washington.

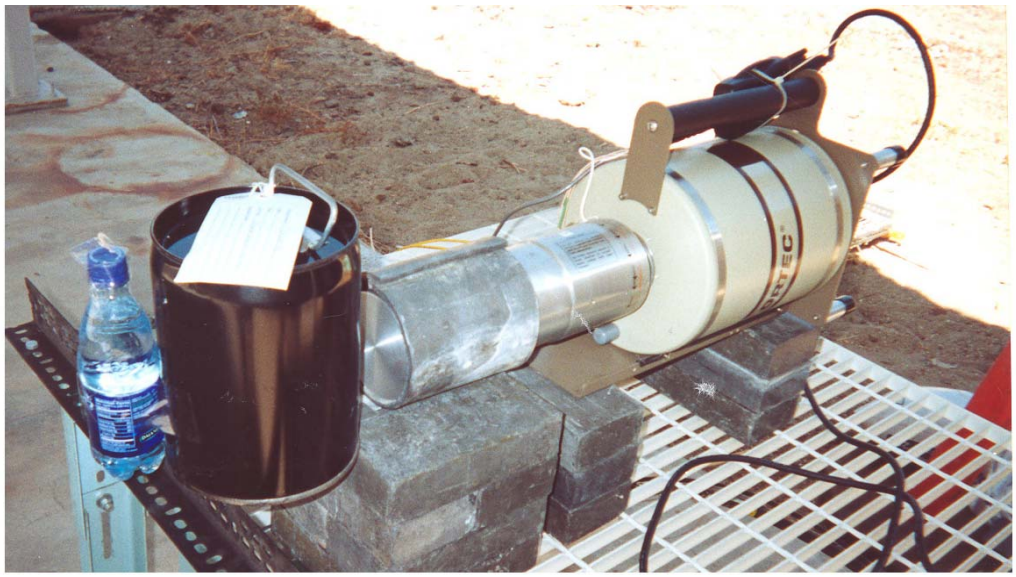


THE REAL STUFF: Dr. Maglich is holding a bag containing 2 lbs. of dead bacterii similar to anthrax, used as anthrax simulant in November 2000 tests

Detection of Anthrax.

Under a DARPA contract, Supersenzor has been able to stoichiometrically differentiate between an anthrax simulant and yeast.

PRODUCT 7A: INDUSTRIAL Q.C. SUPERSENZOR:



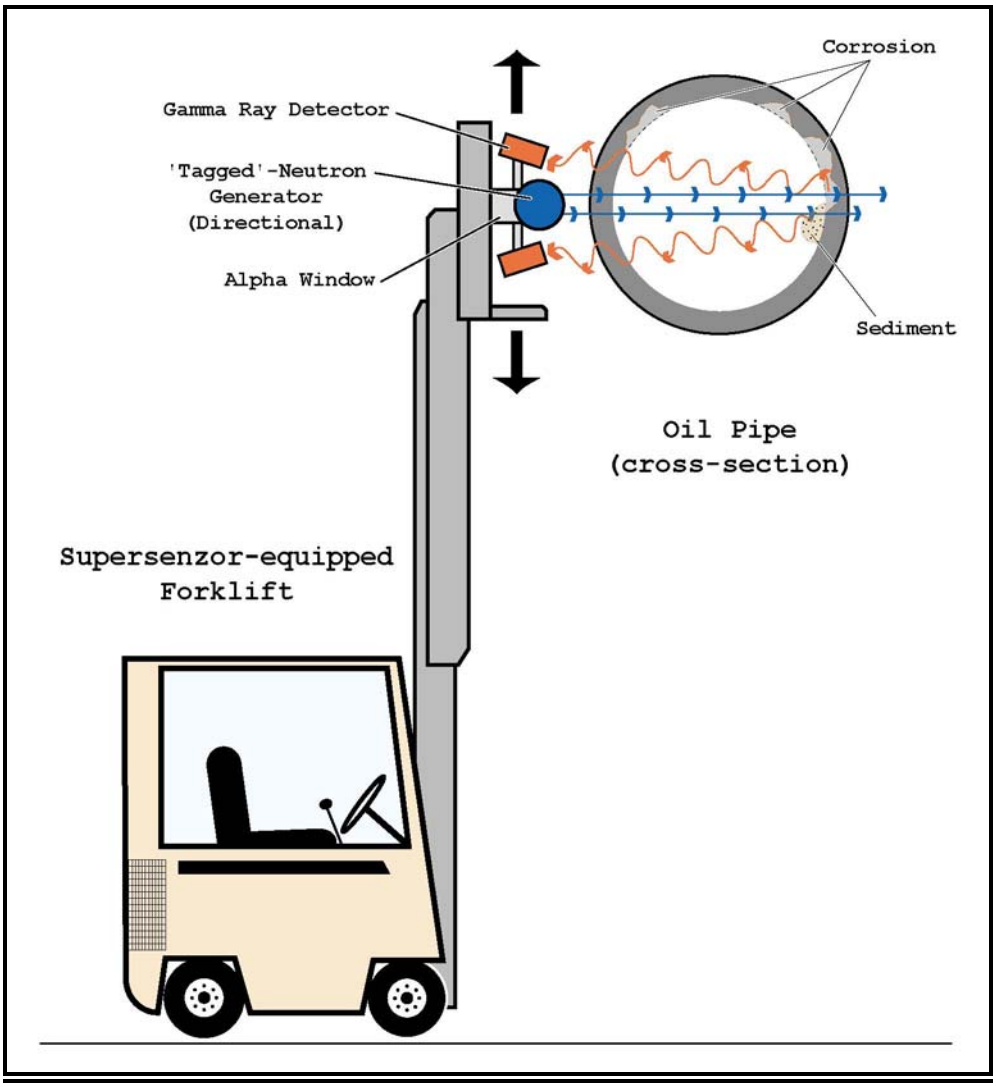
Detection of impurities in crude oil

Minisenzor can remotely measure the percentage of water in oil, and differentiate between "sweet" and crude oil.

Detection of fat content in beef

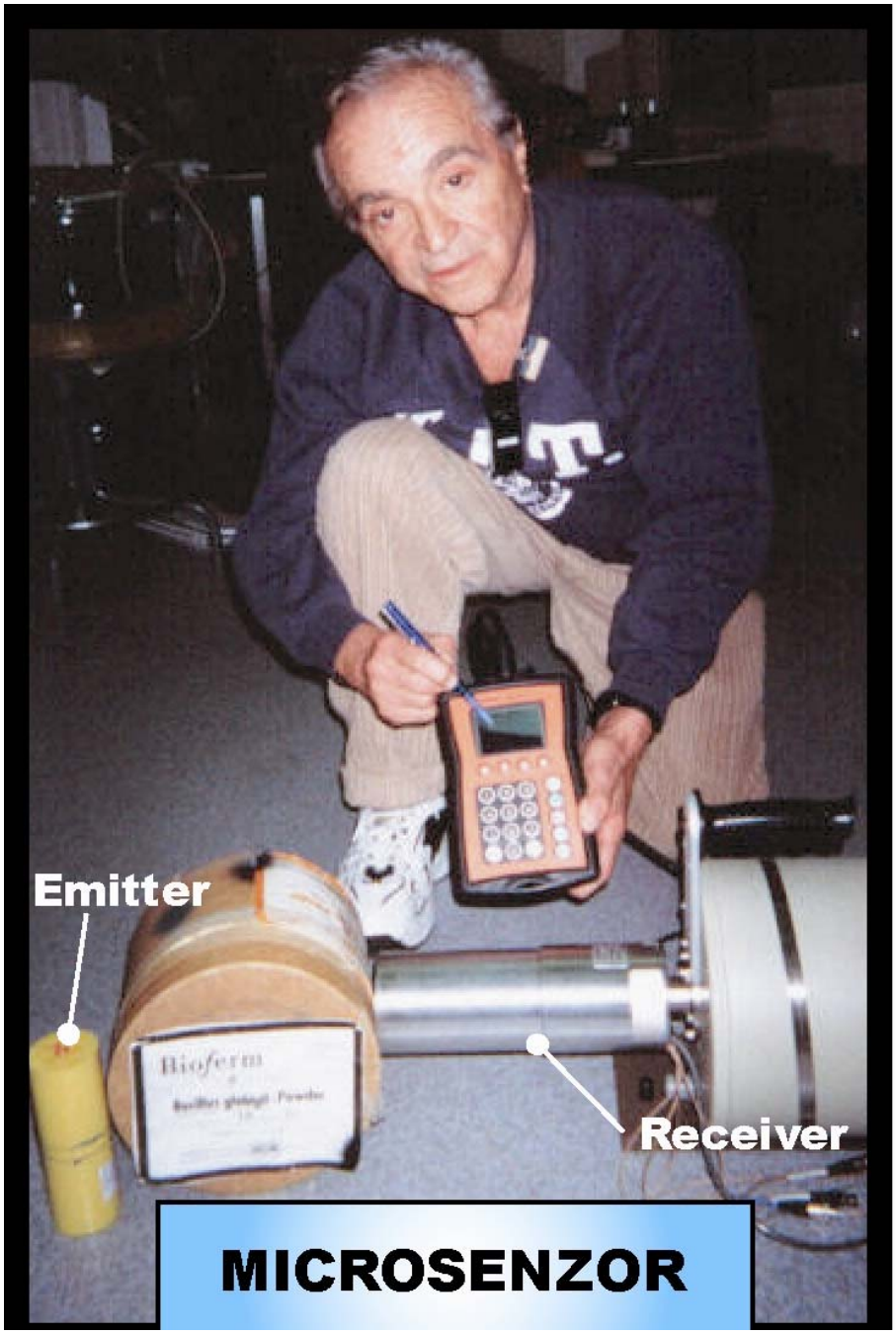
Minisenzor can remotely measure the fat content in ground beef.

PRODUCT 7B: INDUSTRIAL Q.C. For Oil Refineries:



A contract with a major oil company to monitor the oil refining process is under negotiations.

PRODUCT #8: MICROSENZOR.



Handheld Stoichiometric Sensor. (weight: 20lbs)

Microsenzor's neutron emitter weighs only 2 lbs and requires no power supply. Its decision time is 10 times longer than Minisenzor: 10 min. It has demonstrated to the reps. from the office of the FAA's Inspector General its ability to decipher chemical formulas in January 2002. Price: $90,000.